

Application No.: 09/919678

Docket No.: 07244-00111-USA

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Patent Application of:  
Ralf Wichmann et al.

Application No.: 09/919678

Art Unit: 1752

Filed: July 25, 2003

Examiner: H. V. Le

For: BLEACH BATH

**APPELLANTS' BRIEF**

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**APPEAL BRIEF**

**I. THE REAL PARTY OF INTEREST**

Agfa-Gevaert is the real party of interest. The application was assigned and recorded on September 4, 2001, on Reel No. 012138 and Frame No. 0201.

**II. RELATED APPEALS AND INTERFERENCES**

The undersigned is not aware of any related appeals or interferences involving this application.

**III. THE STATUS OF THE CLAIMS**

Claims 1-50, 53 and 68 have been cancelled. Claims 51, 52, 54-67, 69 and 70 are pending. The subject of the appeal are claims 51, 52, 54-67, 69 and 70 which are attached in Appendix I.

#### **IV. STATUS OF AMENDMENTS AFTER FINAL**

A Response After Final Action was filed on March 8, 2004. The Response After Final was entered pursuant to the Advisory Action mailed March 18, 2004.

#### **V. SUMMARY OF THE INVENTION**

The object underlying the invention is accordingly to provide a bleach or bleach/fixing bath which is particularly suitable for processing photographic silver halide materials having an elevated proportion of silver to be bleached and in particular is suitable for processing color reversal materials, and to provide a process for processing color reversal materials, wherein the least possible quantity of complexing agent should be used, a low residual silver content and simultaneously a low bleaching fog value of the processed materials should be achieved and the bleach or bleach/fixing bath should also be resistant to precipitation without stabilizing additives. (see page 3, lines 11-20 of the specification).

The applicants' invention is a color reversal process that allows to bleach silver halide materials, usually color reversal materials, with a small amount of a highly biodegradable iron complex. Surprisingly, it was found for the claimed compound and the claimed concentration range, that a very low residual silver and yellowing can be achieved and that the bleaching solution is free from precipitations. More specifically, the present invention relates to a color reversal process for processing silver halide materials comprising a bleaching step, wherein said bleaching step is performed using a solution which contains at least one iron complex of propylenediaminetetraacetic acid and the total concentration of the stated iron complex in the

solution is at least **0.045 and at most 0.25 mol/l** wherein prior to the bleaching step, the process comprises at least the steps:

first development,

reversal step and

color development (see claim 51 and the specification at page 3, lines 12-26). The preferred embodiments are described in the dependent claims.

#### **VI. REFERENCES APPLIED AGAINST THE CLAIMS**

1. U.S. Patent No. 5,453,348 ("Kuse")
2. U.S. Patent No. 6,013,422 ("Price")
3. U.S. Patent No. 5,652,087 ("Craver") and
4. U.S. Patent No. 5,635,341 ("Yamashita").

#### **VII. THE REJECTION APPEALED FROM**

1. Claims 51-70 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kuse considered in view of Price and the known embodiments with respect to Craver and Yamashita.

#### **VIII. THE ISSUES ON APPEAL**

1. Whether claims 51-70 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kuse considered in view of Price and the known embodiments with respect to Craver and Yamashita?

2. Whether the Examiner has considered the prior art as a whole?
3. Whether the Examiner has selectively picked and chosen from the disclosed multitude of parameters without any direction?
4. Whether the Examiner's argument is based on hindsight reconstruction?
5. Whether the Examiner has shown where the prior art teaches the features of Group II?
6. Whether the Examiner has shown where the prior art teaches the features of Group III?
7. Whether the Examiner has shown where the prior art teaches the features of Group IV?
8. Whether the Examiner has shown where the prior art teaches the features of Group V?
9. Whether the Examiner has shown where the prior art teaches the features of Group VI?

#### **IX. GROUPING OF THE CLAIMS**

The subject of the appeal are claims 51, 52, 54-67, 69 and 70 which are attached in Appendix I. These claims do not stand or fall together.

Group I hereinafter refers to claims 51, 52, 54, 59-67.

Group II hereinafter refers to claim 55.

Group III hereinafter refers to claims 56 and 57.

Group IV hereinafter refers to claim 58.

Group V hereinafter refers to claim 69.

Group VI hereinafter refers to claim 70.

Again, these claims do not stand or fall together because of varying degrees of specificity in the claims.

## **X. ARGUMENTS**

### **A. Group I**

**ISSUE 1:** Whether claims 51-70 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kuse considered in view of Price and the known embodiments with respect to Craver and Yamashita?

Claims 51-70 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kuse considered in view of Price and the known embodiments with respect to Craver and Yamashita.

The present invention is a color reversal process that allows to bleach silver halide materials, usually color reversal materials, with a small amount of a highly biodegradable iron complex. Surprisingly, it was found for the claimed compound and the claimed concentration range, that a very low residual silver and yellowing can be achieved and that the bleaching solution is free from precipitations. More specifically, the present invention relates to a color **reversal process** for processing silver halide materials comprising a bleaching step, wherein said bleaching step is performed using a solution which contains at least one iron complex of propylenediaminetetraacetic acid ("PDTA") and the total concentration of the stated iron complex in the solution is at least **0.045 and at most 0.25 mol/l** wherein prior to the bleaching step, the process comprises at least the steps:

first development,

reversal step and

color development (see claim 51).

According to Kuse, the ferric complex salt of formula A can be used in a wide range of 0.002 to 0.4 mol/l; 0.01 to 0.3 mol/l, 0.05 to 0.55 mol/l (see column 4, lines 48-52); and 0.0 to 1.0 mol/l and 0.05 to 0.4mol/l (see claims 2 and 3). There is no teaching from Kuse that the concentration could depend on the formula of the complexant or on the process the complexant is used in. The bleaching solution according to Kuse further has to contain at least a second ferric complex salt (column 4, lines 53-65) and it is preferred that it contains a bleaching accelerator (column 4, starting at line 66).

Therefore, Kuse is silent to select Fe-PDTA in the concentration as presently claimed for a color reversal process.

The examples of Kuse clearly demonstrate color negative processings that a person of ordinary skill in the art would not have taken into regard for the reversal processing of reversal materials, as Kuse shows silver residues and yellow stain values that are prohibitive for usual color reversal materials. According to Kuse, the residual silver and the yellow stain can only be reduced by unusual fixing agents like iodide or the problematic thiocyanate.

Price in the abstract discloses:

[c]olor reversal photographic elements can be effectively processed to provide color positive images using biodegradable bleaching compositions when the following fixing compositions contain an uncomplexed aminodisuccinic acid additive. The presence of the additive in the fixing composition seems to reduce the retained iron from use of the biodegradable bleaching composition, thereby reducing yellow stain and other undesirable effects in the color images, and iron precipitates in the fixing bath.

Price does not disclose how to achieve the objects of the present invention.



Craver discloses the used a ferric-EDTA bleach regenerator composition can be mixed with bleach overflow to provide a bleach replenisher for reversal color silver halide photographic processes. Craver discloses the use of EDTA and not PDTA as is claimed by the applicants' claimed invention.

Yamashita discloses in the abstract:

A solution for bleaching or bleach-fixing an exposed and developed silver halide color photographic light-sensitive material contains a ferric complex salt of a compound represented by the following Formula (A-I), (A-II) or (A-III), and a compound represented by the following Formula (B):

Therefore, the present invention is not rendered obvious by Kuse and a person of ordinary skill in the art would not have combined Kuse and Price and Craver and Yamashita. Moreover, the combination would not lead to the present invention.

**Issue 2:** Whether the Examiner has considered the prior art as a whole?

**Issue 3:** Whether the Examiner has selectively picked and chosen from the disclosed multitude of parameters without any direction?

**Issue 4:** Whether the Examiner's argument is based on hindsight reconstruction?

The Examiner must consider the references as a whole, In re Yates, 211 USPQ 1149 (CCPA 1981). The Examiner cannot selectively pick and choose from the disclosed multitude of parameters **without any direction** as to the particular one selection of the reference **without proper motivation**. The mere fact that the prior art may be modified to reflect features of the claimed invention does not make modification, and hence claimed invention, obvious **unless the**

**prior art suggested the desirability of such modification** is suggested by the prior art (In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984); In re Baird, 29 USPQ 2d 1550 (CAFC 1994) and In re Fritch, 23 USPQ 2nd. 1780 (Fed. Cir. 1992)). In re Gorman, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991) (in a determination under 35 U.S.C. § 103 it is impermissible to simply engage in a hindsight reconstruction of the claimed invention; the references themselves must provide some teaching whereby the applicant's combination would have been obvious); In re Dow Chemical Co., 837 F.2d 469, 473, USPQ2d 1529, 1531 (Fed. Cir. 1988) (under 35 U.S.C. § 103, both the suggestion and the expectation of success must be founded in the prior art, not in the applicant's disclosure). The applicants disagree with the Examiner why one skilled in the art with the knowledge of the references would selectively modify the references in order to arrive at the applicants' claimed invention. The Examiner's argument is clearly based on hindsight reconstruction.

Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching, suggestion, or incentive supporting this combination, although it may have been obvious to try various combinations of teachings of the prior art references to achieve the applicant's claimed invention, such evidence does not establish prima facie case of obviousness (In re Geiger, 2 USPQ 2d. 1276 (Fed. Cir. 1987)). There would be no reason for one skilled in the art to combine Kuse with Price, Craver and Yamashita.

## **B. Group II**

**Issue 5:** Whether the Examiner has shown where the prior art teaches the features of Group II?

In addition to the arguments presented in Group I above, Group II requires that prior to the bleaching step, the material passes through a conditioning bath. Kuse does not disclose not

disclose nor teach a conditioning step prior to the bleaching step. It is acknowledged that Price and Craver do disclose a pre-bleaching step. However, as stated above, the applicants don't believe that the other references are combinable and that the Examiner's argument is based on hindsight reconstruction.

**C. Group III**

**Issue 6:** Whether the Examiner has shown where the prior art teaches the features of Group III?

In addition to the arguments presented in Group I above, Group III requires the process equilibrium of the solution used for the bleaching step is maintained by apportioning a regenerator. Kuse does not disclose the use of a regenerator. It is acknowledged that Craver discloses to use a ferric-EDTA bleach regenerator. Again, as stated above, Craver does not teach the use of Fe-PDTA. However, as stated above, the applicants do not believe that Craver is combinable prior art.

**D. Group IV**

**Issue 7:** Whether the Examiner has shown where the prior art teaches the features of Group IV?

In addition to the arguments presented in Group I above, Group IV requires wherein the process equilibrium of the solution used for the bleaching step is maintained by apportioning a solution obtained from the bath overflow after rejuvenation. The applicants do not believe that Kuse teaches this feature. As stated above, the applicants don't believe that the other references are combinable and that the Examiner's argument is based on hindsight reconstruction.

**E. Group V**

**Issue 8:** Whether the Examiner has shown where the prior art teaches the features of Group V.

In addition to the arguments presented in Group I above, Group V requires the solution contains substantially no further iron aminopolycarboxylic acid complex. Kuse discloses the use iron aminopolycarboxylic acid complexes (see col. 4, lines 53-65). As stated above, the applicants don't believe that the other references are combinable and that the Examiner's argument is based on hindsight reconstruction.

**F. Group VI**

**Issue 9:** Whether the Examiner has shown where the prior art teaches the features of Group VI?

In addition to the arguments presented in Group I above, Group VI requires the bleaching solution contains no ammonium ions. Kuse discloses the use of ammonium ions in the bleaching solution (see the examples). Kuse teaches away from the claimed invention. As stated above, the applicants don't believe that the other references are combinable and that the Examiner's argument is based on hindsight reconstruction.

**XI. CONCLUSION**

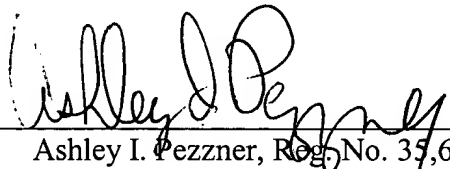
A check in the amount of \$440.00 is enclosed to cover the fee for the appeal brief and a one-month extension of time. It is believed that the claims define an invention which is new,

useful, and unobvious. For the above reasons, the applicants request passage to allowance. This brief is being submitted in triplicate. The PTO is authorized to charge Deposit Account No. 03-2775 the amount of \$330.00. The Notice of Appeal was filed on April 12, 2004.

However, in the event that the undersigned is mistaken in his calculations, an appropriate extension of time to respond is respectfully petitioned for, and the Commissioner is hereby authorized to charge the account of the undersigned attorneys, Patent Office Deposit Account No. 03-2775, for any fees which may be due upon the filing of this paper.

Respectfully submitted,

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APPENDIX I

1-50. (Cancelled)

51. (previously presented) A color reversal process for processing silver halide materials comprising a bleaching step, wherein said bleaching step is performed using a solution which contains at least one iron complex of propylenediaminetetraacetic acid complex in the solution is at least 0.045 and at most 0.25 mol/l wherein prior to the bleaching step, the process comprises at least the steps:

first development,

reversal step and

color development.

52. (Previously presented) The color reversal process according to claim 51, wherein the materials comprises a transparent support.

53. (Cancelled)

54. (Previously presented) The color reversal process according to claim 51, wherein the process comprises a separate fixing step after the bleaching step.

55. (Previously presented) The color reversal process according to claim 51, wherein prior to the bleaching step, the material passes through a conditioning bath.

56. (Previously presented) The color reversal process according to claim 51, wherein the process equilibrium of the solution used for the bleaching step is maintained by apportioning a regenerator.

57. (Previously presented) The color reversal process according to claim 56, wherein the process equilibrium of the solution used for the bleaching step is maintained by directly apportioning a preparation which comprises a concentrated solution.

58. (Previously presented) The color reversal process according to claim 51, wherein the process equilibrium of the solution used for the bleaching step is maintained by apportioning a solution obtained from the bath overflow after rejuvenation.
59. (Previously presented) The color reversal process according to claim 51, wherein the materials have a bleaching proportion of at least 65 mol-%.
60. (Previously presented) The color reversal process according to claim 51, wherein the materials have a bleaching proportion of at least 80 mol-%.
61. (Previously presented) The color reversal process according to claim 51, wherein the materials have a bleaching proportion of at least 90 mol-%.
62. (Previously presented) The color reversal process according to claim 51, wherein the materials have a total quantity of silver of at least 6 g/m<sup>2</sup>.
63. (Previously presented) The color reversal process according to claim 51, wherein the materials have a total quantity of silver of at least 7.5 g/m<sup>2</sup>.
64. (Previously presented) The color reversal process according to claim 51, wherein per m<sup>2</sup> of the materials at least 3.9 g of silver must be bleached.
65. (Previously presented) The color reversal process according to claim 51, wherein per m<sup>2</sup> of the materials at least 5.6 g of silver must be bleached.
66. (Previously presented) The color reversal process according to claim 51, wherein per m<sup>2</sup> of the materials at least 6.3 g of silver must be bleached.
67. (Previously presented) The color reversal process according to claim 51, wherein the solution is a bleach solution.
68. (Cancelled)

69. (Previously presented) The color reversal process according to claim 51, wherein the solution contains substantially no further iron aminopolycarboxylic acid complex.
70. (Previously presented) The color reversal process according to claim 51, wherein the solution contains no ammonium ions.